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SCIENCE AND RELIGION.

SERMON

DELIVERED IN ALBANY DURING THE SESSION OF THE

AMERICAN ASSOCIATION

FOR THE

ADVANCEMENT OF SCIENCE,

BY MARK HOPKINS, D. D.

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SCIENCE AND RELIGION.

A

SERMON

DELIVERED IN THE

SECOND PRESBYTERIAN CHURCH, ALBANY,

ON SABBATH AFTERNOON, AUGUST 24, 1856,

BY MARK HOPKINS, D. D.,

PRESIDENT OF WILLIAMS COLLEGE.

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CORRESPONDENCE.

ALBANY, August 25, 1856.

REV. DR. HOPKINS:

Dear Sir—I am directed by the Local Committee of the Scientific Association to present you their thanks for your able and impressive Sermon on the relations of Science and Religion, delivered in this city yesterday, and to request a copy for publication.

Very respectfully and truly yours, &c.,

S. B. WOOLWORTH,

Secretary of Local Committee.

WILLIAMS COLLEGE, Sept. 1, 1856.

S. B. WOOLWORTH, LL. D.,

Dear Sir—The Sermon, of which you request a copy for publication was prepared at the request of the Local Committee of the Scientific Association, and is now placed at their disposal.

Most respectfully and truly yours,

M. HOPKINS.

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SERMON.

I TIMOTHY, VI, 20, 21.

AVOIDING PROFANE AND VAIN BABBLINGS AND OPPOSITIONS OF SCIENCE FALSELY SO CALLED; WHICH, SOME PROFESSING, HAVE ERRED CONCERNING THE FAITH.

THE genera and species of science are permanent. The genus *Apis*, and the species *mellifera*, are the same to-day as when they were described by Virgil eighteen hundred years ago. So, too, there are permanent manifestations of human character. We learn from the text that the genus *babbler* existed eighteen hundred years ago as it does now, and that then, as now, it was divided into two species. First, there was the simply vain, or empty babbler. Without depth, frivolous, conceited, with no apprehension of the grand and solemn aspects of this universe, with no comprehension of its great problems and interests, he is always and everywhere an annoyance and a hindrance. The second species of babbler is the profane.

In this species conceit is intensified, and there are added to the characteristics of the other, recklessness and malignity. Both were opposed to Christianity, and then, as now, closely associated with these, often identical, were some who professed science of some kind, and opposed Christianity on that ground. They so professed it as to err from the faith. Of this genus some are earnest inquirers, and some mere babblers. Certainly there have never been more perfect specimens of babbling, whether of the simply vain, or of the profane, than have been put forth in the name of science. Before the circulation of the blood was known, what perfect babble were the theories of animal spirits pervading the arteries? How much scientific babble was there, both vain and profane, about the zodiac of Dendera? Of what a retreating ocean of it are we now hearing the last ripples respecting the "vestiges of creation" and the *Acarus Crossi?*

But the doctrine implied in the text is, that whenever anything claiming to be science is in opposition to Christianity, it is science falsely so called; and hence, that between true Christianity and true science there is perfect harmony.

It is also implied in this passage, that there is a sphere of faith distinct from that of science. These are the points to be illustrated; and that we may do so, let us inquire,

1st, What science is?

2d, Whether all science is related to religion?

3d, What science is thus related, and how? and,

4th, Consider the sphere of faith as distinct from that of science, but not opposed to it.

First, then, what is science? This is a *species* under the *genus* knowledge. All knowledge is not science; nor is the most important part of it. Those primitive intuitions which underlie all other knowledge, which are the same in all, and give unity to the race, are not science. A knowledge of isolated facts by the senses, knowledge from testimony, the common knowledge by which life is regulated, is not science. If it were, scientific men would not be distinguished from others. The term is used somewhat loosely, but we shall not depart from the general usage if we say that science is *certain knowledge organized into a system.* If the knowledge be conjectural, or doubtful, it is not science; if it be of single facts or principles unlinked

into a system, it is not science; but wherever there is certain knowledge combined into a system, we call it science. This, however, will include fields of great diversity, as the grounds of certainty, and the associating tie, or bond of unity, differ in different sciences.

In mathematical science, certainty, such as it is, grows out of pure conceptions of the mind, and of relations among them which no will established, and which no will can change. With the equality of the three angles of a triangle to two right angles even the will of the Omnipotent has nothing to do. The same is true of all hypothetical sciences—of logic as it is sometimes understood—as it must be understood to be an exact science. Assuming certain premises, the conclusion, as contained in them, *must* follow irrespective of any will. Here, neither the certainty, nor the science, has anything to do with any fact; but they come from the necessary relations of thought.

But the certainty of physical science depends wholly on the uniformities of nature, as, indeed, does the science itself; and these *may* be the result of will, and so contingent. They doubtless are. These uniformities are either of con-

struction and arrangement among things that co-exist; or of succession among those that follow each other; and only as there is uniformity or resemblance can there be physical science.

And not only do sciences differ in the ground of their certainty, but also in the tie that binds their parts together.

Some sciences, as Mineralogy, are simply those of arrangement according to resemblances, without collocation. Others, as Anatomy, are merely a knowledge of uniform arrangement, depending doubtless on a law, though that is unknown. Others, again, as Astronomy, find unity and certainty in what is called a law, or a force acting according to a fixed rule. The conception of a force acting directly as the quantity of matter, and inversely as the square of the distance, belongs to the mind alone; but when we find from observation that it is realized in nature, and that every movement of every body in the system is regulated by it, we reach what is properly called a law. By physical law is most generally meant the uniformity itself; but here we have not merely that, but the rule by which that uniformity is produced. When we reach this, if the law be

strictly universal, the science is no longer inductive. It becomes deductive. It gives us the power of prediction and of calculation, not only with respect to observed bodies, but also respecting those not yet observed, and concerning these we may reason, and, as Le Verrier did, draw certain conclusions. This is the highest form of physical science.

We speak here of law; but what we know of physical science is simply uniformities, not causes. Science knows nothing, it can know nothing of law as the cause of any uniformity, but only as the rule by which the cause acts. When it understands itself, it claims to know only this. Our conception of the law is purely subjective. No man can show that anything corresponding to it is necessary, or that other laws may not obtain in other portions of immensity.

Resemblances, uniformities, and the rule by which these last are produced, implying the power of classification and prediction—these are the whole of physical science.

We next inquire whether all science has relation to religion?

And here I observe that mathematics has, in itself, no such relation, nor has any hypothetical science. Pure mathematics is concerned with nothing that cannot be demonstrated. But nothing can be demonstrated that depends, or can by any possibility depend, upon will—no *fact* can be demonstrated—and as the operation and power of will are excluded from the science, it can have no necessary reference to any personal being, beyond the mathematician himself. How can a science that has no dependence on will, or power, and that has nothing to do with facts, have any relation to religion, which is wholly practical, and deals only with persons and with facts?

It is true, as was said by Plato, that God geometrizes. He has made everything by weight and measure, has "weighed the mountains in scales and the hills in a balance." It is true that the forces of nature, and the figures of her crystals, and the forms of her orbits correspond with the definitions and the calculations of mathematics. If they did not there could be no science concerning them. But it is one thing to demonstrate a proposition respecting an ellipse as a hypothetical figure, and quite another to

ascertain the *fact* that the earth moves in an ellipse, and so moves in it as to be brought round to the same star year by year at the same time without the variation of the fraction of a second. The first is pure mathematics, and has no relation to religion; the second is a fact, and is a bright and wondrous illustration of the wisdom and the power of God.

So it should appear to all; but, strange to say, it is the very perfection of this coincidence between demonstration and fact that has blinded the eyes of some to the moral force of the facts, and has made mathematics the *occasion* of infidelity. So was it with La Place—so with other mere mathematicians. But how? How has it been that adepts in the grandest of all sciences—in the knowledge of those heavens which "declare the glory of God," have been atheistic? It is thus: The mathematician can tell by figures the position of the heavenly bodies a hundred years ago, as he doubts not, a hundred years hence. Even the perturbations and irregularities of the system he finds to be but as a vast pendulum swinging always in an arc that can be measured by his formulas. But the relations of the figures by

which these results are obtained are necessary; and what more natural than to transfer this necessity over to the facts so wonderfully corresponding with the demonstration, thus excluding God, and all will, and bringing all things under the sway of a necessity that is absolute? It is this transference, perhaps often unconscious, of the necessity of the mathematical relations over to the physical facts coincident with them, that has utterly vitiated the logic of such men as La Place. Could La Place demonstrate that there would be an eclipse at a given moment? Can you, my mathematical friend, demonstrate that there will be one at a given moment next year? No. The opposite of a demonstration is an absurdity, and it certainly is not absurd to suppose that an eclipse will not take place. You can demonstrate it *if*—*if* the laws of nature should not be arrested, and *if*, under them, no new body should come in; but demonstration knows of no possible *if* intervening between its data and its conclusions. The laws of nature may be arrested; it would not be absurd. Even under them there may come in a new comet of six thousand years, with a tail as long as its circuit,

and leave your demonstration merely idle figures on paper.

But the forces of nature *may* depend upon will. Working, as they all do, regularly, and for beneficial ends, it would seem most natural to think they do. But if we admit this, then the very coincidence between demonstration and fact, thus used as a premiss to exclude God, may be the very highest evidence, nay, *the only possible evidence of the infinite energy of a will perfectly regulated.* The duration of the system is necessary to show that there is no weariness in the energy; its vastness and inconceivable velocities are necessary to show that that energy has no limit; and the mathematical precision is necessary to show that it is *perfectly* regulated. Could God, in any other way, have given such an example of punctuality and order? or have so combined the ideas of infinite energy and of perfect control?

Thus, while pure mathematics has no direct relation to religion, the relation to it of nature appearing under mathematical forms is most intimate. Within its own sphere this science is worthy of all regard, but inferences from it which are not mathematical, but which men

seek to clothe with the same certainty, to dignify with the name of science, and professing which they err from the faith, we are at liberty to designate as "science falsely so called." If it can be shown at all, certainly mathematics cannot show that the highest lesson taught by nature under mathematical forms is not that she is the exponent of a will perfectly regulated, and yet free. Thus seen, she becomes the most perfect possible type and herald of a moral government in which "judgment shall be laid to the line, and righteousness to the plummet."

We next inquire what sciences are related to religion, and how?

And here we say that all sciences of fact and law, of organization and succession, are related to religion, but they are so related only as there may be indicated through them *intelligence* and *will*. Intelligence and will are the elements which we must find in those materials which are the basis of science if we would bring it into relation to religion.

But that *intelligence* must lie among the materials of science, as thought in a book, would seem to me self-evident if it had not so often been overlooked or denied. Is it possible,

let me ask, to study and understand anything which does not contain thought, and so is its product? Can we thus study a book, or an orrery? If not, how can we study and understand that which the orrery represents? Can intelligence commune except with intelligence manifesting itself either directly, or through signs that may be called a language? Can there be an objective law that does not correspond to a subjective idea, and that did not originate in it? It is the dignity of science that in it we reach and share the thoughts of God. We may receive them as from a letter unauthenticated, and so have no conscious communion with him; but we cannot understand them and have a science, a *knowing*, unless they *are thoughts*, and so, proofs of an intelligent being who thus expresses them. Thus does it seem to me, that the very existence, the possibility even, of that science through which men are sometimes led to deny God as intelligent, constantly gives the lie to that denial—that the denial by science of intelligence manifested through those things which it studies, is suicidal.

But while there is this proof through science of intelligence in God, do not those *uniformities*

in nature, without which science could not be, preclude the idea of free will? It is, as has been said, the knowledge of uniformities in succession and in arrangement that is science; and as science knows nature only as uniform, whether through law or otherwise, the question is, whether her inference would not be to a uniform cause, possessing possibly a degree of intelligence, but devoid of a proper personality and will. This *is* the inference which the mere naturalist has drawn. He has passed from the uniformity of his data to the uniformity of their cause, precisely as the mathematician has passed from the necessity of his data to the necessity of their cause. The premises are different, but the result is essentially the same. Now, if, as Comté and his followers simply assume, there is properly no such thing as will, if it be only our ignorance that prevents the reduction of all things to calculable uniformities, and so to what they call positive science, then the inference would be legitimate. But against this we say that both primitive belief and fair deduction are conclusive. To this I ask your attention.

We say, then, that the uniformities of nature are not only no proof of the want of person-

ality and will in their author, but that they prove it.

And we say that they do this, first, by certain uniform exceptions to the uniformities. Of this we take a case under caloric. It is a uniform fact in the science of that, that it expands all bodies, and of course that its abstraction contracts them. But to this last there is put in the uniform exception of water when it has reached the freezing point, because our oceans and lakes would otherwise become solidified. Now we say that the putting in of a uniform exception like this, for an obvious end, shows that the uniformity itself was the result of choice.

We say, secondly, that the uniformities of nature prove the presence of personality, will, and choice, from their congruity with the constitution of the mind, and their adaptation to its education and wants. Our mental constitution and the instincts of all animals are pre-conformed to these uniformities, so that we naturally expect them. For a logical belief in the uniformity of the processes of nature, a wide induction would be required, but we find this so impressed on the mind of the infant, that its very constitution is adapted to the state into which it

is to come, as that of the eye is to the light to which *it* is to come. There is in us all a natural expectation of the constancy of nature. But thus viewed this expectation is of the nature of a promise; and a promise can be made only by a personal being; and that constancy of nature, of which research only deepens the conviction, is simply the fulfilment of the promise. Who doubts the personality of a man because he is punctual to a moment, and exact in the fulfilment of his promises? And so every instance of that constancy in the processes of nature upon which science is based, instead of being an evidence of a want of personality in God, is but the utterance of nature responding to that of revelation, and saying, "He is faithful that promised." If we admit that simple uniformity may originate in an instinctive force, yet how could a congruity between the constitution of mind and of matter have sprung from any thing but the choice of an all-comprehensive and a divine wisdom?

But not only is the constancy of nature congruous to the constitution of mind, and an evidence of the faithfulness of God, it might well have been chosen with reference to the wants

of mind. Who does not see that this constancy and the consequent certainty is an essential element—perhaps not more so than uncertainty —but still an essential element in the education of mind and its acquisition of practical power? Who does not see that a want of constancy in structure and arrangement would have necessitated the study of each individual object, and so life had been consumed before we had learned how to live? Who does not see that a want of constancy in succession would have rendered experience nugatory, and rational calculations and plans for the future impossible? Is, then, a feature in the constitution of nature so adapted to the education and wants of mind that we cannot see how a wise being should have failed to choose it to be set down as evidence of a want of choice?

But, once more, that the uniformities of nature indicate no want of personality and will in their author is evident, because science itself shows that science has not always been possible, and that when it has, its uniformities have not been permanent, but have changed and been progressive through different epochs. Science carries us back to a beginning. We thank

geology for that. She says, "*In the beginning*," not less emphatically than does revelation. To the *miracle* of that beginning she goes back and lays her hand upon her mouth. She says, "It is too wonderful for me, it is high, I cannot attain unto it." She has reached the limit of her element, the point where her conditions cease. Science also shows that after this beginning, there have been periods when science was impossible; that when it has been, it was not the same as now, and that it may not always be. What science could there have been in those geological epochs, those formative periods, when the electrical agencies were unbalanced, and the fire-storms were abroad, and the waters were playing hide and seek over the tops of these hills and along these valleys, and when the demon of the earthquake had his back under our mountains lifting them up? What science would there be now if the crust of the earth should again be riven, and the broad Pacific should be let down upon that ocean of fire of which geologists tell us? In utter chaos science is impossible. How different too must science have been in her forms and orders of succession when the earth was covered with a species of

vegetation now extinct and consolidated into coal, and when the Iguanodon and Megalosaurus, and huge Saurians were the "monarchs of all they surveyed?" And not only does science say that there was a time when the present species were not, but also, that when they came, they came, not by development, but that the magnates walked in the van. She has no whisper to favor the theory of the confusion of species—of the transition of a sea-plant into a land-plant—of a mite into a mammoth, or a man. She sweeps away all notion of any permanent chain of being. She says that species have not been permanent, that in the march of creative energy they have been constantly dropped and never repeated, that the progress has been always upward, that science is no fixed thing, no perpetual circle; but that with new epochs, new constructions and new uniformities have been added, and that every new movement not only connects itself with what preceded, but looks forward to some higher system for which it prepares, and which it dimly foreshadows. So has it been in the long past—so is it now. In the present system, mental and physical, there are symptoms of unrest. He knows little

who does not know that the elements are sleeping beneath and around him which may, as in a moment, bring it to an end; and the voice of geology, from the past, no less than that of revelation, is, that all these things are to be dissolved, and that we are to look for a new heavens and a new earth.

For the conception and carrying forward of this progressive and ever brightening plan, reason demands the presence of a personal God. Here are no circling uniformities. Its step is onward and upward towards some consummation worthy of Him. Of this mighty plan the uniformities of science are a part. Seen thus, not as the merely scientific man sees them, from within, where only uniformities can be seen, but from without and from above; seen in their place, as permanent only for a time, as changing with the epoch, and flexible to the wants of mind, these very uniformities proclaim with trumpet tongue the presence of intelligence and of will.

Thus does the babble of necessity, and of independent laws, and unconscious agencies, and pantheistic instincts die away, and science takes its place with its censer in its hand, and worships before the throne of the Almighty.

This point I dwell upon, because science has been infidel to such an extent. It ought not to be. It can be only through a false logic, taking its departure, as I have endeavored to show, from the certainties of mathematics, and the uniformities of physical science. Let science keep its own place. In its own right it cannot go beyond itself, and in that right it has strictly nothing to do but to arrange and label phenomena; and to leave the inferences to be drawn from them respecting the great interests of man and the profounder problems of the universe to a higher wisdom. If the inference from the science to irreligion were a part of the science, we would respect it as such; but the moment a scientific man attempts to draw such inferences, for which, perhaps, the very pursuit of his science may have specially disqualified him, he lays aside his own character, and puts himself on ground where others have a right at least quite as good as he; for, of the problems of religion and human destiny, science, as such, can know nothing. They have nothing to do with any circular and recurring movement. As has been said, all knowledge is not scientific, or rather science is not all knowledge, nor can

scientific knowledge in any case reach the essence of things. The inference from any particular science that there is, or is not, a God, is not a part of the science; and as to the mode of his existence, science has never "so much as heard whether there be any Holy Ghost." She may reach general truths and laws, but of the ground out of which her phenomena spring she is utterly ignorant. Her sphere, if not narrow, is limited. Even in Astronomy, where she has been called "star-eyed," she knows only recurring movements, but is mole-eyed with reference to that great movement which is sweeping us all—sun and stars together—we know not whither. She knows nothing of phenomena except as they recur; nothing of love, and worship, and of a comprehensive wisdom, though she may minister to them. These, the great leaders in science, its discoverers and pioneers, have retained. They have been in sympathy with God. They have known that man as man is greater than man as scientific. But men of the second rank have often cultivated science at the expense of their humanity. It is not that they have been too scientific, but exclusively or falsely so. The stream has deepened only by

growing narrow. They have become incapable of reasoning from data not involved in their particular science, and on subjects aside from their own specialty, mere babblers.

In thus showing the relations of science and religion we have only considered fundamental, and not particular revealed truths. This the time would not admit. With respect to these we neither fear nor shun science. We welcome it. We welcome all truth. The Bible stands on its own evidence, which we see and feel to be conclusive; and we have no fear that any thing that can be shown to *be* science can be brought into contradiction with any thing that can be shown to be in the Bible.

We now pass to consider, as was proposed, in the fourth place, the sphere of faith as distinct from that of science, but not opposed to it. "Which some professing," says the text, "have erred from the faith"—that is, from the Christian doctrine that is received, not on the ground of the evidence of science, but of testimony, and by faith; thus implying that faith is a ground of belief and of action distinct from science.

And who does not believe this? Come with me, my scientific friend. Leave your retorts

and dried specimens. Here is an infant. See it look up with confiding love into the eye of its mother. Is there science in that? No. There is confidence in a person, and that is *faith*. This can never become either science or its basis. Is this now a less natural, or necessary, or rational principle of belief and of action than that first faith of this same infant in the constancy of nature, which is the basis of science; for in the last analysis even science will be found to rest upon faith of a certain kind? Are not, indeed, the functions of the first evidently higher and more vital than those of the last? Certainly they are as much higher and more vital, as the sphere of life, of society, of moral government, is higher than that of matter and mere physical laws. Faith is the essential bond between man and man. It is the bond of the family, of the State; on it every commercial and social interest depends. It unites every loving seraph to the throne of God, it unites the society of Heaven. And is science to ignore this, and mock at it, while yet she is grinding in the prison house of her own low uniformities? Nature might perish, and spiritual well-being

remain, but if *this confidence* be lost, our highest good is inconceivable.

Science knows necessary relations and uniformities, but can it know any thing of love or worship, or ultimate ends? Is science life? The *fact* of life lies back of science. Is science freedom? The *fact* of freedom is above science. Is it love? Love springs up by no rule of science. Is science wisdom? Wisdom uses science in the pursuit of ultimate ends, but of these science knows nothing. Is there science in a smile, a tear, a repartee? Can science make a home, or ever preside there? Science may cook the dinner; it always should; but "better is a dinner of herbs where love is," though it be poorly cooked, "than a stalled ox," scientifically cooked, "and hatred therewith." But freedom, love, wisdom, involve faith; and give this to human beings, give them faith in each other and in God, and the ministrations of science are secondary. This is what is needed on earth; this will underlie the joys of Heaven.

This difference between persons and things, and between the principles by which we are fitted to act with reference to each, has not been sufficiently signalized. Persons and things form

distinct spheres, and when I trust property in the hands of a person simply on his word, the ground of my reliance is not the same as when I trust, or expect that the sun will rise to-morrow. One is an instinctive confidence in the constancy of nature confirmed by experience, and may underlie science; the other implies an apprehension of freedom, responsibility, goodness, and a voluntary confidence in the person possessing these. This is faith, and can never be the basis of science. What is natural, fixed, recurrent, is the sphere of science; what is personal and free is the sphere of faith.

Now between these two spheres of persons and of things, of faith and of science, and the two kinds of movement in nature already referred to, there is a beautiful correspondence. As there are in Astronomy circular and recurrent movements among the bodies of the system which science can calculate, and also an absolute movement in space of which science can only say that it is, so is it everywhere in the works of God. Everywhere these two movements are wonderfully mingled; everywhere science knows something of the one, and nothing of the other, which is yet the great movement.

Of all that pertains to human life that is fixed and recurrent science may speak, but that flow of thought and feeling and moral life which is once for all, and turns not back, is not within its sphere. It knows not whence it cometh, nor whither it goeth.

So that onward movement in the march of creation, of which I have spoken, how grand it is!—how mysterious in its origin! How inscrutable in its issues! Only after the dethronement of chaos, and during the first epoch in which there were orderly arrangements and recurrent movements, was science possible. Then she might have pitched her tent, and polished her glasses, and built her laboratory, and have begun her observations and her records. She might have counted every scale on the placoids, and every spot on the lichens, and every ring on the graptolites, and have analysed the fog from every standing pool; and so have gone on thousands of years, feeling all the time that her tent was a house with stable foundations, and her recurring movements an inheritance forever. Do you suppose, she might have said, that this fixed order will be broken up? Do you not see that "since the

fathers fell asleep all things continue as they were!" But that epoch came to its close. The placoids, and lichens, and graptolites, and all the science connected with them, were whelmed beneath the surface, to be known no more except as they might leave their record there. Then again, in the second period, science might have gone the same round, and fallen into the same infidelity. And, indeed, from her own stand-point alone, how could she do otherwise? The circular movement cannot speak of that which is to end it. And so it has been through the epochs.

According to its own records the coming up of the creation out of the past eternity has been as the march of an army that should move on by separate stages with recruits of new races and orders at the opening of each encampment. During those long days of God there was scope for science, and for a new one in each. In each, science could pitch the tent, and forage, and perfect the arrangement for the encampment; but she could not tell when the tents were to be struck, or where the army would march next. And so the movement has been onward till our epoch has come, and we

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have been called in as recruits. And now again science is busy with her fixed arrangements and recurring movements; but knows just as little as before of the rectelinear movement—of the direction and termination of this mighty march. *It is within this movement, and not in the sphere of science that our great interest lies.* Belonging to arrangements and movements in this world, science can do much for us in this world, but she cannot regenerate the world, she cannot secure the interests which lie only in the rectelinear line of movement, and which are "the one thing needful." Of that movement we can know nothing except through faith. Through that we may know. We believe there is one who has marshalled the hosts of this moving army, and who has the ordering of them, and that he has told us so much of this onward movement as we need to know; and here it is that we find that sphere of faith which we say is distinct from science, but not opposed to it.

Into this sphere, if you have not done so, we invite you, my honored hearers, to enter. We say it is the higher sphere, and we invite you to come *up* into it. You admit and illustrate a unity in all fixed arrangements; why not admit

and study a grander one in consecutive movements? You know one thing, we ask you not to be ignorant of another, without which all other knowledge will, in the end, seem folly. We ask you to join to the attainments of science the humility of the Christian, his benevolence and his high aims. We ask you not only to learn the teachings of nature, but also to learn of Him who has said, "Come unto me;" who is "meek and lowly of heart." Thus, and thus only, shall you "find rest unto your souls." Here is rest; here we bring you to knowledge that is permanent. The recurring movements of science shall cease. The heavens and the earth "shall wax old as a garment, as a vesture shall God fold them up, and they shall be changed," but his moral government shall endure, and in the onward march of that, what scenes of awe and terror, what bright scenes of joy and wonder may arise, no tongue can tell.

We know but in part, but what we do know not only meets the wants of our moral nature, but also corresponds with the teachings of physical science. The termination of this present epoch, foretold by Peter and Paul, who knew nothing of Geology or Chemistry, is precisely

such as Geology shows has taken place heretofore, as Chemistry shows may readily take place again. And then the simplicity, and worthiness, and moral grandeur, of the epoch foretold as lying beyond, fully correspond, and more than correspond with the magnificence of past movements as revealed by Geology, and with the terrific termination of the present scenes which the Scriptures reveal.

In these coming scenes, not only, as heretofore, will the fountains of the great deep be broken up, and the surgings of the internal ocean of fire rend the earth, and matter be unchained from its present affinities, and the electrical agencies flash and thunder from pole to pole; but above the crash and roar of the earthquake, louder than the thunder, shall be heard "the voice of the archangel and the trump of God, and the dead shall arise." "Then shall the Son of Man come in his glory, and all his holy angels with him, and he shall sit on the throne of his glory. And before him shall be gathered all nations; and he shall separate them one from another as a shepherd divideth his sheep from the goats." "Then shall the wicked go away into everlasting punishment, but the

righteous into life eternal." Then, according to his promise, do we "look for new heavens and a new earth wherein dwelleth righteousness."

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